

Remarks/Arguments

Summary

By this Amendment, claims 1-9 have been canceled in favor of new claims 10-18.

Accordingly, claims 10-18 are now pending in the application.

Preliminary Amendment

For the record, it is noted that Applicants previously filed a Preliminary Amendment with the original application papers. For the sake of completeness of the PTO records, a copy of the Preliminary Amendment is attached.

35 U.S.C. ¶112, second paragraph

This rejection has been rendered moot by the cancellation of claims 1-9.

35 U.S.C. ¶102 and ¶103

The original claims were variously rejected under 35 U.S.C. ¶102 and ¶103 as being unpatentable over the references cited by the Examiner at pages 3-9 of the Office Action.

As noted above, by this Amendment, the original claims have been canceled in favor of new claims 10-18. Independent claim 10 includes the following limitation:

“providing gas supply sources which are connected to a gas reaction chamber or chamber system, at least one of said gas supply sources providing a pure molecular halogen gas which is fed directly into the reaction chamber”

The claimed process involving localized generation of a gas from a pure molecular halogen is novel and unobvious.

For example, JP 2230720 discloses the reaction of a group III metal, with HCl and H₂. These are caused to react and a group III halogen gas is produced. There is no initial reaction in the alleged prior art processes with just a pure halogen gas, or the creation of a pure halogen gas, at the initial step. As there is no mention of pure halogen gases as precursors for the reaction, there is no suggestion to the skilled person to use such gases in the claimed process.

Further, in the alleged prior art, all gases are mixed together, which one would presume produces a more rapid process. As the skilled person would strive to reduce the number of stages in a process, the use of pure precursors teaches away from the prior art.

An advantage of embodiments of the present invention is that, by using a stage involving pure gasses, which are then subjected to conditions where a resultant reactive process gas is produced, the need to polish gases to remove impurities is not required.

Independent claim 15 is an apparatus claim and includes features which make the apparatus particularly suited for the process claimed such as incorporating a pure halogen gas generator and having a direct feed between the reaction chamber and the process chamber/tool so that a reactive gas product can be supplied on demand.

For at least the reasons stated above, Applicants respectfully contend that claims 10-18 define over the references of record.

Conclusion

No other issues remaining, reconsideration and favorable action upon the claims 10-18 now pending in the application are requested.

Respectfully submitted,
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Patent Application of :
Jyoti Kiron BHARDWAJ : Attn: Applications Branch
Serial No. [NEW] : Attorney Docket No.: WLJ.059
Filed: November 3, 2000 :
Title: GAS GENERATION SYSTEM

PRELIMINARY AMENDMENT

COPY

Honorable Commissioner of
Patents and Trademarks,
Washington, D.C. 20231

Sir:

Preliminary to the examination of the above-identified application, please enter the following amendments and consider the following remarks:

IN THE CLAIMS:

Please cancel claims 7-9 without prejudice.

Please amend the claims as follows:

Claim 3, line 1, delete "or claim";

line 2, delete "2".

Claim 4, line 1, delete "or claim";

line 2, delete "2".

Claim 5, line 1, delete "or claim";

line 2, delete "2".


Claim 6, line 3, change "any one of claims 1 to 5" to --claim 1--.

REMARKS

By this Preliminary Amendment, claims 7-9 have been canceled, and claims 3, 4, 5, and 6 have been amended to eliminate the multiple dependent claims. Entry of this Preliminary Amendment is respectfully requested.

Respectfully submitted,

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